

OPERATION

Automatic
The Charge Module automatically selects the optimum battery charging **MODE** - depending on battery charge.

Manual
Press and hold **MODE** switch, Charge Module cycles between modes
Boost Mode - indicator light will stay ON
Normal Mode - indicator light will flash
Storage Mode - indicator light will flash very slow, once in 8 seconds
Charge Module - stays in the selected mode when switch is released.

The Charge Module will automatically override as necessary to maintain optimum battery performance.

Charge Module Status

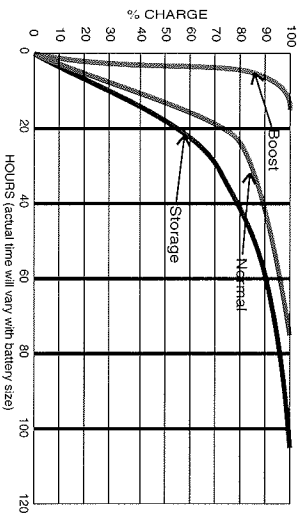
Indicator Light	Status Mode
On	Boost - Battery full charge (above 12.8 V)
Fast Flash	Battery - more than 50% charge (11.8 V - 12.8 V)
Slow Flash	Battery - (13.2V)
Very Slow Flash	Battery - less than 50% charge (less than 11.7 V)
Off	

NOTE: All Voltages are approximate.

Indicator Light Flash Rates:
Fast flash ON/OFF - Slow flash every 1 sec. Very slow flash every 8 sec.
Indicator light will not show battery condition when the Charge Module is in the **BOOST** or **STORAGE MODE**.

Charge Curves

Typical battery charging curves for the 60 amp Power Supply, using a fully discharged 12S Amp-hour battery. These curves show the percent of charge versus time with the Power Supply in each of its three operating modes.



CHARGE MODULE

- Plugs into all Stinger Power Supplies.
- Intelligently monitors 12V charging system and automatically makes proper adjustments.
- Reduces sulfation* and extends battery life!
- Features 3 "automatic" operating modes that can also be manually selected.

STORAGE: Ensures battery remains charged and reduces sulfation during storage or long periods of inactivity. Output charging voltage is set to a nominal 13.2 volts. Power Supply remains in Storage Mode until it senses activity then the Charge Module automatically switches to Normal Mode. Once daily while in the Storage Mode, a desulfation cycle activates to minimize sulfation* build-up.

NORMAL: Constantly monitors power usage and provides excellent charging capability. Output charging is set to nominal 13.6 volts. When system is inactive for some time, Charge Module automatically switches to Storage Mode.

BOOST: Constantly monitors battery for voltage drop (predetermined level) and quickly recharges battery or boosts power when needed. Charge voltage is automatically increased to nominal 14.4 volts for a limited period or until battery exceeds set voltage level. Charge Module automatically switches to Normal Mode when battery is fully charged.

**Sulfation is a chemical action in batteries which forms a white deposit on the lead plates resulting in loss of battery capacity*

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Patent Numbers: 5,982,643 6,184,649

Made in China



COMPUTER CHARGE

- Fits all Stinger®
- Intelligently monitors charging system and automatically
- Reduces sulfation

OPERATION continued

The Charge Module is designed to be used with Stinger Power Supplies. The Charge Module controls the Power Supply's charging system and automatically activates the optimum battery charging mode. Charging modes can also be activated manually.

Storage Mode

- Nominal no load charge of 13.2 volts is applied to the battery for long periods of storage without damaging the battery.
- (Desulfation Cycle) Every 21 hours the Charge Module will switch to the Boost Mode and apply 14.4 volts as an equalizing and desulfation charge for 15 min., to prevent acid stratification and clear the beginning of lead sulfate on the battery plates, and then return to the Storage Mode.
- Charge Module will automatically switch to Storage Mode when the battery is charged and no battery activity is detected.
- When battery activity is detected the Charge Module switches to Boost Mode applying an equalizing charge of 14.4 volts for one hour then switches to the Normal Mode.
- The Storage Mode can reverse the sulfation process and possibly provide extra life for older batteries.

Normal Mode

- Nominal no load charge of 13.6 volts is applied to the battery during normal use.
- Default mode
- With the Charge Module, the charging system is maintained at the optimum setting for best battery performance.

Boost Mode

- Nominal no load charge of 14.4 volts charges the battery very quickly and helps prevent battery sulfation that reduces how well your battery performs.
- Boost Mode will only be enabled up to four hours, to prevent over charging the battery.
- Maintaining this level for long periods can lead to excessive water loss and overheating of your battery.
- Boost Mode is activated if the battery becomes discharged to a low level.
- Boost Mode is also activated when the system exits the Storage Mode.

INSTALLATION

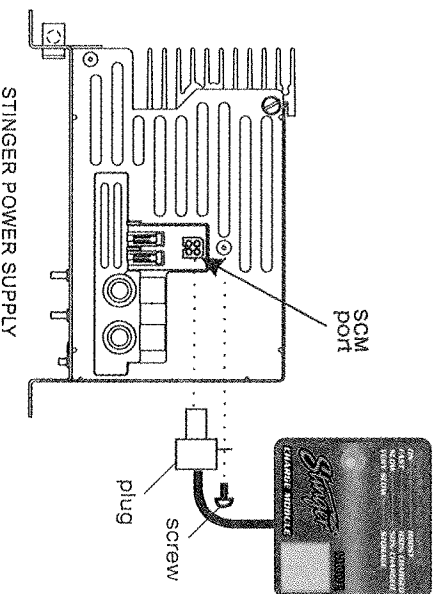
Inspect your Stinger Power Supply to be sure it is connected properly and in good working order. Refer to the Power Supply's owner's manual.

Mounting

- The Charge Module is not weather tight - do not mount it where it will be exposed to the weather or wet conditions.
- The Charge Module should be mounted close to Power Supply to allow easy cable routing.
- Remove mounting tape backing
- Attach Charge Module to clean smooth surface

Connection

- Power Supply must be OFF
- Remove screw above Power Supply's SCM port
- Put Charge Module plug into Power Supply's SCM port
- Fasten plug to Power Supply with screw
- Turn Power Supply ON



PROBLEM	POSSIBLE CAUSES	ACTION
Indicator light is not on	Battery is less than 50% charged.	Reduce load requirements
No charge to battery	No AC power to Power Supply	Check AC wiring
	Excessive loading of system	Reduce load requirements
	External Fuse(s) blown	Check battery for reverse polarity
	Input voltage is less than 105 VAC or above 150 VAC	Correct input supply voltage
	Bad battery cell(s)	Replace battery
	Excessive load for Power Supply	Reduce load requirements or install larger Power Supply

VOLTAGE READING

The most accurate measurement of the battery's voltage must be made under a no-load condition. Disconnect the battery from any load or charger for at least 15 or 20 minutes before checking voltage.

11.7 Volts - Battery is not charged.

12.8 Volts - Ideal voltage, battery is fully charged. Maintaining this no-load voltage will help the battery to last as long as the manufacturer believes it will.

12.9-13.5 Volts - Indicates that energy taken from the batteries is being replaced by the Power Supply.

13.6 Volts - A healthy battery can be maintained at this desirable state indefinitely with one precaution, with wet cell batteries: electrolyte must not fall below the plate tops. Add distilled water to maintain the proper level.

14.1 - 14.4 Volts - Power Supply is in the boost mode. This setting will rapidly charge the battery.